

CLAIMS

What is claimed is:

1. A hand truck for transporting articles comprising:

a frame having a plurality of wheels;

an electrically powered lift member attached to said frame;

said frame including a pair of side frame members; and

each of said side frame members having means for maintaining said lift member in a level condition as said lift member moves up and down.
2. A hand truck according to claim 1, wherein:

said lift member has a first planar member oriented horizontally and a second planar member oriented perpendicular to said first planar member; and

level condition maintaining means comprising a guide track on each of said side frame members and a roller assembly for movement in each said guide track; and

each of said roller assemblies connected to said second planar member.
3. A hand truck according to claim 2, wherein each of said roller assemblies has a pair of rollers for moving within a respective one of said guide tracks.
4. A hand truck according to claim 2, wherein each of said roller assemblies is connected to said second planar member via a right angle member and a third planar member extending between said side frame members.
5. A hand truck according to claim 1, further comprising:

a pair of electric motors for raising and lower said lift member;

a pair of rotatable screw members driven by said electric motors; and

means on said lift member for engaging said rotatable screw members.

6. A hand truck according to claim 5, wherein:

each of said screw members has a first sprocket gear attached to an upper end;

each of said electric motors has a second sprocket gear driven by a shaft extending from said motor; and

means for transmitting power from said electric motors to said screw members via said first and second sprockets.

7. A hand truck according to claim 6, wherein said transmitting means comprises a chain with a plurality of links for engaging said sprockets.

8. A hand truck according to claim 5, wherein said electric motors are supported by a support member extending between said side frame members.

9. A hand truck according to claim 5, wherein each of said rotatable screw members is supported in a bearing structure at its lower end.

10. A hand truck according to claim 1, wherein said frame has a pair of lower structural members attached to said side frame members and said plurality of wheels are attached to said lower structural members.

11. A hand truck according to claim 10, wherein each lower structural member has a pair of wheels attached thereto.

12. A hand truck according to claim 11, wherein each said pair of wheels comprises a smaller wheel attached to a front end of said lower structural member and a larger wheel attached to a rear end of said lower structural member to provide improved

stability.

13. A hand truck according to claim 1, wherein said lift member has a plurality of spaced apart tines for engaging articles to be transported.
14. A hand truck according to claim 1, further comprising a handle attached to a rear portion of each of said side frame members.
15. A hand truck according to claim 1, further comprising a plurality of engaging members attached to an outer surface of each of said side frame members and a net for engaging said engaging members, said net enabling articles to be stacked on said lift member and preventing said articles from falling during transportation.
16. A hand truck according to claim 15, wherein said engaging members comprise a plurality of hooks.
17. A hand truck according to claim 1, further comprising:
 - a reversible electric motor mounted to said frame;
 - a cable spool connected to said electric motor; and
 - a cable connected to said cable spool and to said lift member to cause said lift member to move upwardly as said cable is wound onto said cable spool and to move downwardly as said cable is taken off said cable spool.
18. A hand truck according to claim 18, further comprising a gear reducer between said motor and said cable spool for controlling the output of said motor.
19. A hand truck for transporting articles comprising:
 - a U-shaped frame;
 - a lift member for upwards and downwards movement relative to said frame;

a pair of rotatable screw members attached to said frame;

said lift member having means for engaging said rotatable screw members so as to move upwardly and downwardly as said screw members rotate in a first direction and then in a second direction; and

at least one motor for rotating said screw members via sprocket gears and a transmission member.

20. A hand truck according to claim 19, further comprising said frame having side frame members and means, associated with said side frame members, for maintaining said lift member horizontal as said lift member moves upwardly and downwardly relative to said frame.
21. A hand truck according to claim 19, further comprises a pair of electrically driven motors for rotating said screw members.
22. A hand truck according to claim 19, wherein said lift member has a plurality of tines for engaging articles to be transported.
23. A hand truck according to claim 19, further comprising at least four wheels attached to said frame to facilitate movement of said hand truck.